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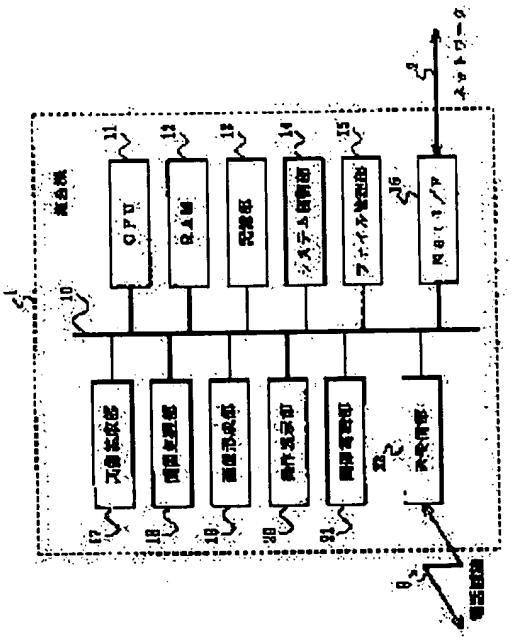
(54) METHOD AND DEVICE FOR MANAGING FILE OF COMPOSITE MACHINE

(57)Abstract:
PROBLEM TO BE SOLVED: To easily restore a file deleted in error without uselessly using a storage area by deleting a file after preparing a backup file for the file when a file requested to be deleted is a file of a prescribed sort.
SOLUTION: When a user depresses a deletion button on an operation display part 20, a file management part 15 judges whether a file to be deleted is a file requiring the preparation of a backup file or not. When the file to be deleted is a backup preparation requiring file such as a confidencial reception document or a polling reservation document, a backup file for the file is prepared and stored in an image storing part 21. Although a limited storage area (image storing part 21) can be effectively utilized by deleting the prepared backup file by a manager of the composite machine 1 at proper time, the backup file can be automatically deleted also by the composite machine 1 automatically.



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* NOTICES *

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CLAIMS

[Claim(s)]
[Claim 1] It is the file-management approach of a compound machine of carrying out deleting this file as the description after creating the backup file of this file, when it is the file of a predetermined classification which judged the classification of the file set as the object of this deletion demand on the occasion of the deletion demand of a file in the file-management approach of a compound machine of providing an image-storage means store an image, and this file set up beforehand.
[Claim 2] Said predetermined classification is the file management approach of the compound machine according to claim 1 characterized by being a confidential incoming correspondence and a polling reservation document.
[Claim 3] Said backup file is the file management approach of the compound machine according to claim 1 characterized by being deleted when predetermined time amount has passed, after this backup file is created.
[Claim 4] Said backup file is the file management approach of the compound machine according to claim 1 characterized by being periodically deleted at the predetermined spacing.
[Claim 5] It is the file management approach of the compound machine according to claim 1 characterized by deleting this file on the occasion of the deletion demand of the file of this predetermined classification, without creating the backup file of this file when there is access once [at least] in the past to the file of said predetermined classification.
[Claim 6] The file-management equipment of the compound machine carry out providing a backup creation means create the backup file of a file judged to be the file of a predetermined classification beforehand set up in the file-management equipment of the compound machine possessing an image-storage means store an image, with a file classification decision means judge the classification of a file on the occasion of the deletion demand of a file, and this file classification decision means as the description.
[Claim 7] Said predetermined classification is file management equipment of the compound machine according to claim 6 characterized by being a confidential incoming correspondence and a polling reservation document.
[Claim 8] File management equipment of the compound machine according to claim 6 characterized by providing further a backup deletion means to delete this backup file when predetermined time amount has passed, after said backup file is created.
[Claim 9] File management equipment of the compound machine according to claim 6 characterized by providing further a backup deletion means to delete said backup file periodically at the predetermined spacing.
[Claim 10] the file management equipment of the compound machine according to claim 6 characterized by said backup creation means not creating the backup file of the file of this predetermined classification when the file of said predetermined classification is been alike and received and there is access once [at least] in the past.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] Especially this invention relates to the file management approach of a compound machine and equipment which can prevent disappearance of the file by an operation mistake etc. about the file management approach of a compound machine, and equipment.
[0002]
[Description of the Prior Art] In the compound machine which has a confidential box function, or facsimile apparatus, the scanner image (image which used the compound machine as a scanner and was read by this) for transmitting to the terminal of the polling reservation document transmitted with the directions from a confidential incoming correspondence or a communications partner into a confidential box, PC, etc. is accumulated. These documents and images are respectively treated as a file, and can be easily deleted by actuation of a user. Moreover, after treating a lot of scanner images for processing with PC, in order to give facilities to a case so that those files may be deleted at once, the package deletion carbon button for deleting the file in a confidential box collectively is prepared in many cases.
[0003] In the compound machine in which package deletion of such a file is possible, when a user pushes a package deletion carbon button accidentally, it will delete to important files, such as a confidential incoming correspondence and a polling reservation document. the case where the confidential incoming correspondence has been deleted -- delivery of the document -- when it will mainly ask again transmission of a document and the polling reservation document has been deleted, since the document directed even if the partner was going to take out the document does not exist, it will be influenced of incorrect deletion of two or more human beings -- a trouble will occur.
[0004] Since such incorrect deletion of a file is a problem which exists with all the equipments not only treating a compound machine but an electronic file, the approach for restoring the incorrect-deleted file is proposed from the former.
[0005] For example, in the file system given in JP,4-317145,A, restoration of the file which deleted them accidentally automatically at the time of file deletion as copied the contents of the deletion file to the backup file storage region was performed without applying excessive time and effort, and disappearance of the file by the operation mistake is prevented.
[0006] However, if the backup file of the file deleted in this way is created, the backup file of an unnecessary file will also be created, a storage region will be used vainly, and it will become difficult to create the backup file to all files in the compound machine to which especially memory capacity was restricted.
[0007]
[Problem(s) to be Solved by the Invention] As mentioned above, in a compound machine or facsimile apparatus, when the file especially the confidential incoming correspondence, and the polling reservation document have been incorrect-deleted by the operation mistake, the effect is large and to enable it to restore the incorrect-deleted file easily is desired. Moreover, it is difficult to realize with the compound machine with which a storage region is restricted to create a backup file for all the files deleted like a file system given in JP,4-317145,A.
[0008] Then, this invention aims at offering the file management approach of a compound machine and equipment which can restore the incorrect-deleted file easily, without using a storage region vainly.
[0009]
[Means for Solving the Problem] After creating the backup file of this file when it is the file of a predetermined classification which judged the classification of the file set as the object of this deletion demand on the occasion of the deletion demand of a file in the file-management approach of a compound machine of providing an image-storage means store an image, in invention of claim 1, and this file set up beforehand in order to attain the purpose which

mentioned above, it carries out deleting this file as the description.
[0010] Moreover, in invention of claim 2, said predetermined classification is characterized by being a confidential incoming correspondence and a polling reservation document in invention of claim 1.
[0011] Moreover, in invention of claim 3, said backup file is characterized by being deleted when predetermined time amount has passed, after this backup file is created in invention of claim 1.
[0012] Moreover, in invention of claim 4, said backup file is characterized by being periodically deleted at the predetermined spacing in invention of claim 1.
[0013] Moreover, in invention of claim 5, in invention of claim 1, when there is access once [at least] in the past to the file of said predetermined classification, it is characterized by deleting this file on the occasion of the deletion demand of the file of this predetermined classification, without creating the backup file of this file.
[0014] Moreover, in invention of claim 6, it is characterized by providing a backup creation means to create the backup file of a file judged to be the file of a predetermined classification beforehand set up with this file classification decision means in the file management equipment of the compound machine possessing an image storage means to store an image.
[0015] Moreover, in invention of claim 7, said predetermined classification is characterized by being a confidential incoming correspondence and a polling reservation document in invention of claim 6.
[0016] Moreover, in invention of claim 8, in invention of claim 6, after said backup file is created, when predetermined time amount has passed, it is characterized by providing further a backup deletion means to delete this backup file.
[0017] Moreover, in invention of claim 9, it is characterized by providing further a backup deletion means to delete said backup file periodically at the predetermined spacing in invention of claim 6.
[0018] moreover, in invention of claim 10, in invention of claim 6, said backup creation means is characterized by not creating the backup file of the file of this predetermined classification, when the file of said predetermined classification is been alike and received and there is access once [at least] in the past.
[0019]
[Embodiment of the Invention] Hereafter, the file management approach of the compound machine concerning this invention and one example of equipment are explained to a detail with reference to an accompanying drawing.
[0020] Drawing 1 is the block diagram showing the configuration of the compound machine which applied this invention. The compound machine 1 possesses a system bus 10, CPU11, RAM12 and the storage section 13, the system control section 14, the file management section 15, NetI/F (network interface)16, the image read station 17, the image-processing section 18, the image formation section 19, the actuation display 20, the image storage section 21, and the transceiver section 22, and is constituted, and other each part is mutually connected through the system bus 10.
[0021] As for the system control section 14, the control software is stored, and CPU11 operates each part based on this control software. Moreover, RAM12 is an activity memory area which stores required information etc. temporarily, in case CPU11 operates, and the storage section 13 is a memory area which stores destination information, a parameter, etc. The file management section 15 creates backup if needed, in case a file is deleted, the image read station 17 reads an image in a manuscript etc., and outputs it as image data, the image-processing section 18 performs edit / processings (formation of sign compound, enlarging or contracting, compression expanding, etc.) for image data, and the image formation section 19 prints image data in a record form etc. The actuation display 20 is a user interface, it consists of display devices which display an input device and various information, such as a keyboard for a user to input directions and information and a touch panel, such as LED and LCD, and the image storage section 21 memorizes the image read by the image read station 17, and the received image, and the backup created in the file management section 15 is also memorized here. Moreover, the transceiver section 22 is connected to the telephone line 3, and facsimile data are transmitted [it connects with a network 2, and NetI/F16 transmits and receives image data etc. through a network 2, and / NetI/F] and received through this telephone line 3.
[0022] in this compound machine 1, the deletion demand of the file from a user is resembled, it receives, and the classification of the corresponding file will be judged, and if file classification is a confidential incoming correspondence and a polling reservation document, backup will be created.
[0023] Drawing 2 is a flow chart which shows the flow of actuation of the compound machine 1 at the time of file deletion. If the compound machine 1 starts actuation (step 101) and the deletion carbon button of the actuation display 20 is pushed by the user (step 102), the file which the file management section 15 deletes will judge whether it is the object which creates backup (step 103).
[0024] Here, if the file to delete is a candidate for backup creation (it is YES at step 103), the file management section 15 will create backup of the file concerned, it stores in the image storage section 21 (step 104), and if it is not a candidate for backup creation (it is NO at step 103), it will remain as it is, the file management section 15 will delete the

file concerned from the image storage section 21 (step 105), and processing will be ended (step 106).
[0025] By the way, although the created backup can use effectively the storage region (image storage section 21) restricted because the manager of the compound machine 1 deletes at a suitable stage, the compound machine 1 can also perform deletion of backup automatically.
[0026] Here, actuation of the compound machine 1 in the case of performing automatic deletion of backup with reference to drawing 3 and drawing 4 is explained. Drawing 3 is a flow chart which shows the flow of actuation of the compound machine 1 in the case of carrying out time management of the backup separately, and deleting it, and drawing 4 is a flow chart which shows the flow of actuation of the compound machine 1 in the case of carrying out time management of the backup as a whole, and deleting it.
[0027] If backup is created by the file management section 15 when carrying out time management of the backup separately (step 201), CPU11 will operate the timer formed in that interior (based on software) (step 202), and will count up this timer (step 203). If it is carried out until predetermined time, for example, 24 hours, passes (it is NO at step 204), and predetermined time passes (it is YES at step 204), count-up of a timer will delete the backup (thing corresponding to the timer concerned) stored in the image storage section 21 (step 205), and will end processing (step 206).
[0028] Moreover, if a compound machine operates and the first backup is created when carrying out time management of the backup as a whole (step 301), CPU11 will operate the timer formed in that interior (based on software) (step 302), and will count up this timer (step 303). If it is carried out until predetermined time, for example, 24 hours, passes (it is NO at step 304), and predetermined time passes (it is YES at step 304), all that are stored in the image storage section 21 will carry out backup deletion (step 305), and count-up of a timer will clear the value of a timer (step 306), will return to step 303, and will count up predetermined time amount again.
[0029] Next, with reference to drawing 5 thru/or 8, the actuation at the time of file deletion is explained. Drawing 5 thru/or 8 are drawings having shown the example of a display of the touch panel of the actuation display 20.
[0030] In deleting a file, a user operates the touch panel of the actuation display 20, and displays the file deletion directions screen 30-1 as shown in drawing 5 . The print button 31 which prints and takes out a file (document), the deletion carbon button 32 which deletes a file, the whole sentence document selection carbon button 33 which chooses all files as an object of a print or deletion, the selection carbon button 34-1 which chooses a file separately, or 34-4 is displayed on the file deletion directions screen 30-1.
[0031] When deleting the file currently displayed on this file deletion directions screen 30-1, the depression of that file can be carried out by pushing the carbon button in which a file to delete the selection carbon button 34-1 thru/or among 34-4 is shown (it being a depression about the selection carbon button 34-2 at drawing 5), and carrying out the depression of the deletion carbon button 32 continuously.
[0032] If the eliminated files are a confidential incoming correspondence and a polling reservation document at this time (drawing 5 confidential incoming correspondence), backup will be created and that display will be updated by the file deletion directions screen 30-2 shown in drawing 6 .
[0033] On the file deletion directions screen 30-2, "the confidential incoming correspondence which received on August 10" shown with the selection carbon button 34-2 is shown by the selection carbon button 35-2 with a backup display surrounded with the broken line which shows that it was deleted.
[0034] Moreover, in the file deletion directions screen 30-1 shown in drawing 5 , if the whole sentence document selection carbon button 33 is pushed, all files are chosen, and the depression of the deletion carbon button 32 is continuously carried out when it is going to delete all files, the file deletion directions screen 30-3 as shown in drawing 7 will be displayed on a touch panel. The file deletion directions screen 30-3 shows the purport which deletes all files in a window 36, waits to push the confirmation button 37 in this window 36, and deletes all files.
[0035] If the confidential incoming correspondence and the polling reservation document are contained in the deleted file also when all files are deleted, those backup will be created and it will be shown by the selection carbon button 35-1 with a backup display surrounded with the broken line which shows that backup was deleted like the deletion directions screen 30-4 of drawing 8 , and 35-2.
[0036] Moreover, although backup was surely created in old explanation when deleting a confidential incoming correspondence and a polling reservation document, these files are not files which must not necessarily be deleted. For example, in a confidential incoming correspondence, the case where it is printed after receiving corresponds to this, and the case where the partner connected through the telephone line 3 acquires this corresponds by the polling reservation document. That is, when there is access to these files, you may remove from the object of backup creation like other files.
[0037] Here, after the file for backup creation has access with reference to drawing 9 , actuation in case deletion of a file

is performed is explained.
[0038] Drawing 9 is a flow chart which shows the flow of actuation of the compound machine 1 in case deletion of a file is performed, after having access in the file for backup creation.
[0039] If the compound machine 1 starts actuation (step 401) and the deletion carbon button of the actuation display 20 is pushed by the user (step 402), the file which the file management section 15 deletes will judge whether it is the object which creates backup (step 403).
[0040] If the file to delete is a candidate for backup creation here (it is YES at step 403) It judges whether furthermore there was any access to these files (step 404). When there is no access, NO) and the file management section 15 create backup of the file concerned at the (step 404, and it stores in the image storage section 21 (step 405). The file management section 15 deletes the file concerned from the image storage section 21 (step 406), and ends processing (step 407).
[0041] On the other hand, if it is the case (it is NO at step 403) where the file to delete is not a candidate for backup creation, and a candidate for backup creation with access (it is YES at step 404), without creating backup, the file management section 15 will delete the file concerned from the image storage section 21 (step 406), and will end processing (step 407).
[0042] In addition, since the case where two or more users access can be considered in the case of a polling reservation document, it does not judge whether there was only any access at step 404, but you may make it judge whether only the count of predetermined had access.
[0043]
[Effect of the Invention] As explained above, in case deletion of a file is performed according to this invention Since it constituted so that it judges whether the document deleted is the candidate for creation of backup, backup might be created only when it is the object of backup creation, and a file might be deleted Since unnecessary backup is not created while restoration of the incorrect-deleted file is easy, the storage region which accumulates a file can be used effectively.

[Translation done.]

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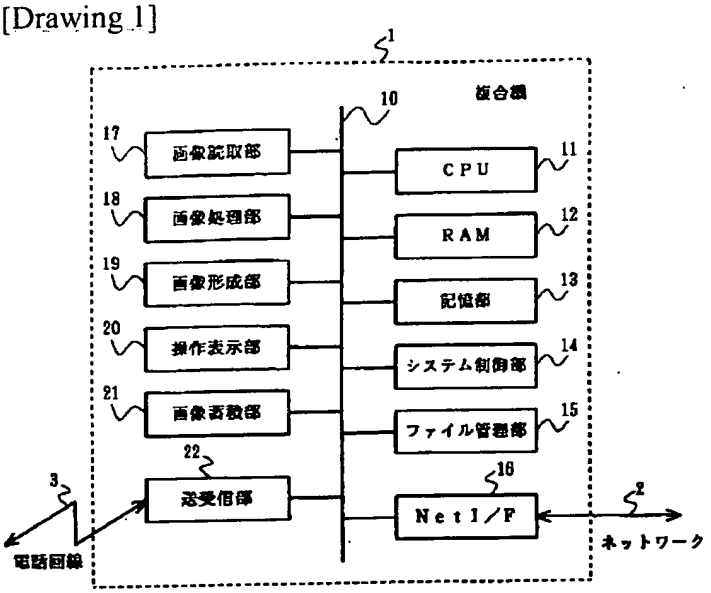
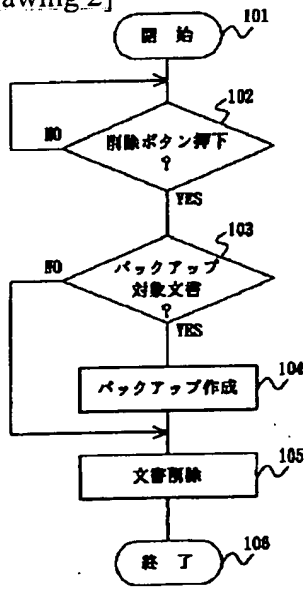
DRAWINGS

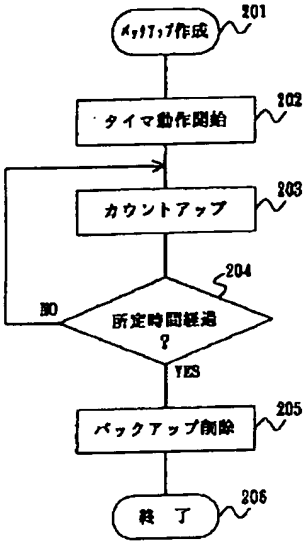
[Drawing 1]



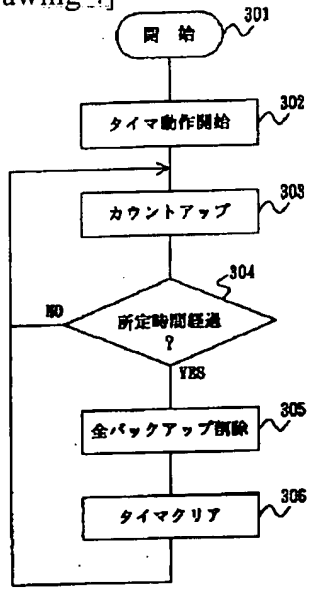
[Drawing 2]



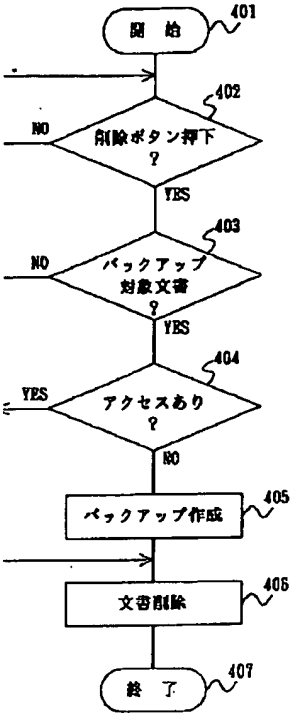
[Drawing 3]



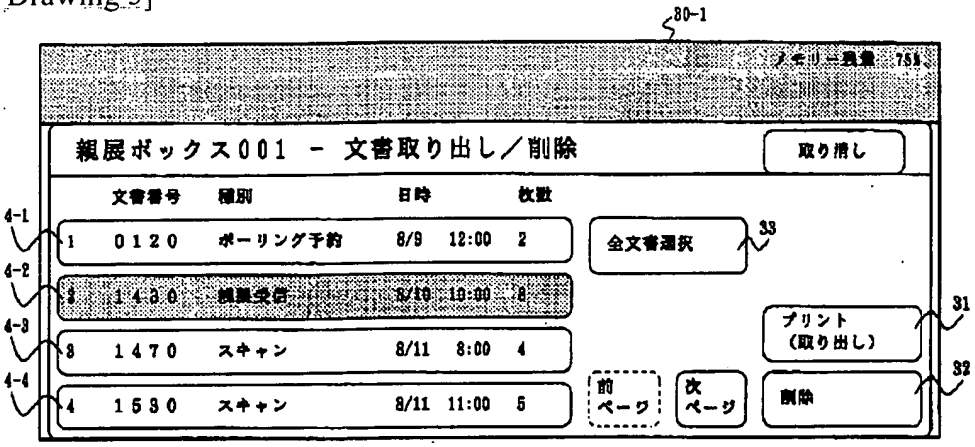
[Drawing 4]



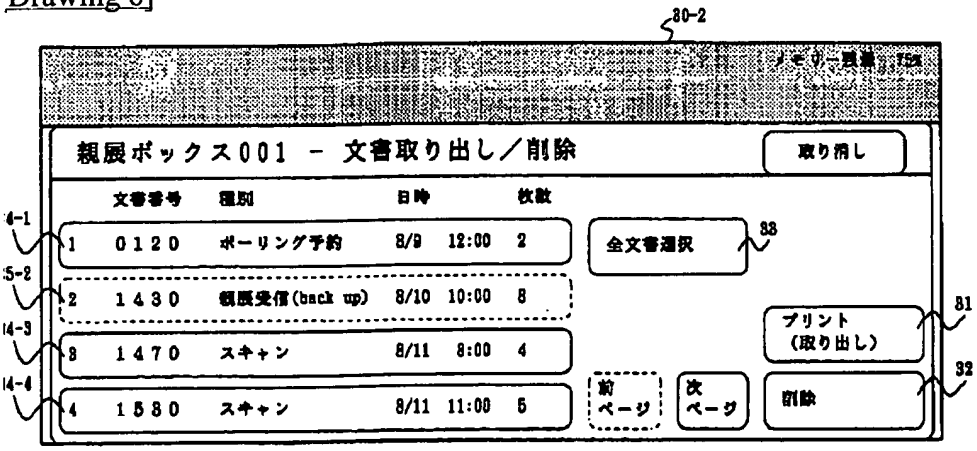
[Drawing 9]



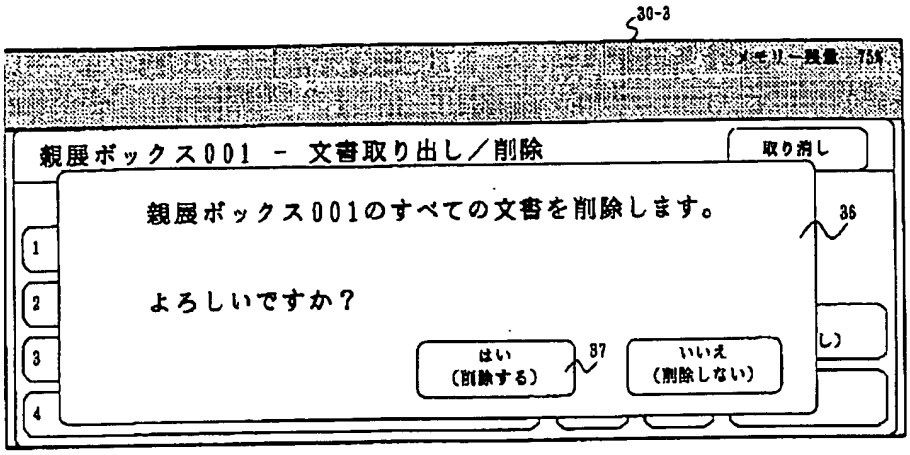
Drawing 5]



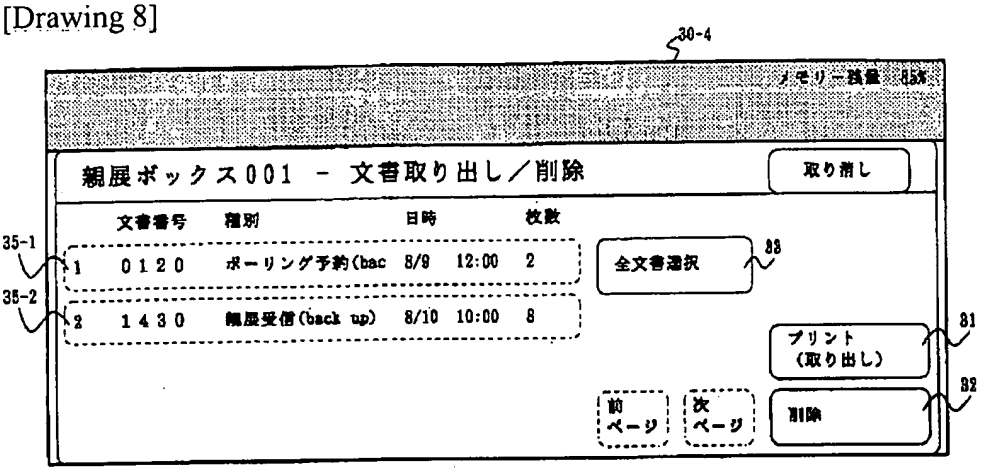
Drawing 6]



Drawing 7]



[Drawing 8]



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